

All District Engineers

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Special Provision for Precast, Prestressed Concrete Members

January 9, 2004

This special provision was developed by the Bureau Bridges and Structures. It should be inserted into all contracts requiring precast, prestressed concrete I-beams and Bulb T-beams.

The districts should include the BDE Check Sheet marked with the applicable special provisions for the April 23, 2004 and subsequent lettings. The Project Development and Implementation Section will include the paper copy in the contract.

This special provision will be available on the transfer directory January 9, 2004.

80120m

PRECAST, PRESTRESSED CONCRETE MEMBERS (BDE)

Effective: April 1, 2004

Revise the tables, "Maximum Allowable Dimensional Tolerances for Precast, Prestressed I-beams and Bulb T-beams" in Article 504.06(d) of the Standard Specifications to read:

"Maximum Allowable Dimensional Tolerances for Precast, Prestressed Concrete I-Beams and Bulb T-Beams	
	mm
Depth (flanges, web and fillets)	± 5
Depth (overall)	+ 5 to - 3
Width (flanges and fillets)	± 5
Width (web)	+ 5 to - 3
Length	± 3 per 3 m, max. + 15 to - 20
Square Ends (deviation from square)	± 5
Skew Ends (deviation from tangent offset)	± 5
Side Insert (spacing between centers of inserts and from the centers of inserts to the ends of the beams)	± 15
Bearing Plates (spacing between the centers of bearing plates)	± 15
Bearing Plate (spacing between the centers of bearing plates to the ends of the beams)	± 5
Bearing Plate or Bearing Area (variation from a true horizontal plane or from a plane surface when tested with a straightedge)	± 2
Stirrup Bars (extension above top of the beam)	0 to - 10
Stirrup Bars longitudinal spacing	
Within a distance equal to the depth of the member and measured from the end of the member	+ 25
In all other locations	+ 50
<p>The number of stirrups shall not be less than the required number in each length. Additional stirrups may be added when the maximum allowable tolerance is exceeded provided the minimum clearance between stirrups is not less than 50 mm.</p>	
<p>End Stirrup Bars - not more than 50 mm from the end of the beam</p>	
Horizontal Alignment (deviation from a straight line parallel to the centerline of the beam)	± 3 per 3 m, max. ± 30

Maximum Allowable Dimensional Tolerances For Precast, Prestressed Concrete I-Beams and Bulb T-Beams (English)	
	in.
Depth (flanges, web and fillets)	± 1/4
Depth (overall)	+ 1/4 to - 1/8
Width (flanges and fillets)	± 1/4
Width (web)	+ 1/4 to - 1/8
Length	± 1/8 per 10', max. + 1/2 to - 3/4
Square Ends (deviation from square)	± 1/4
Skew Ends (deviation from tangent offset)	± 1/4
Side Insert (spacing between centers of inserts and from the centers of inserts to the ends of the beams)	± 1/2
Bearing Plates (spacing between the centers of bearing plates)	± 1/2
Bearing Plate (spacing between the centers of bearing plates to the ends of the beams)	± 1/4
Bearing Plate or Bearing Area (variation from a true horizontal plane or from a plane surface when tested with a straightedge)	± 1/16
Stirrup Bars (extension above top of the beam)	0 to - 3/8
Stirrup Bars longitudinal spacing	
Within a distance equal to the depth of the member and measured from the end of the member	+ 1
In all other locations	+ 2
<p>The number of stirrups shall not be less than the required number in each length. Additional stirrups may be added when the maximum allowable tolerance is exceeded provided the minimum clearance between stirrups is not less than 2 in.</p>	
<p>End Stirrup Bars - not more than 2" from the end of the beam</p>	
Horizontal Alignment (deviation from a straight line parallel to the centerline of the beam)	± 1/8 per 10 ft, max. ± 1 1/4"